

REMARKS

Claims 1-10 are pending in the patent application. Claims 1 and 2 have been amended. New claims 11-17 have been added. No new matter has been added.

Claims 1, 2, and 6-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hall et al (WO 98/473111) in view of Larsen (5,058,155).

The claim 1 has been amended for clarification purposes only and is believed patentable for reasons set forth below. New claims 11-17, present new features which provides further bases for patentability.

The present invention combines a great many features into a headset that have never been constructed previously and can only be found in the cobbling together of many prior art references.

Larsen (of the same assignee as the present case) discloses a controllable circuit located in a separate box. On object of claim 1 is to avoid the use of a separate box, but still have the features of separating the manual operating members from the manual adaptation controls. The desirability of eliminating a separate box has been a goal of the present assignee for many years, but without inventive effort, it has not been possible to achieve the advantages of a unitary headset with controls, switches and amplification. So the question is one of obviousness and it would seem probative that the assignee of both Larsen and the present invention would not have simply built the Larsen concept into the headset at the time of that invention, unless of course, it was not obvious to do so.

The addition of the Hall reference of little help as Hall is directed to improvements in the headband and the only relevance is the presence of an "electronics package" 120 of unknown capability.

The difficulties of adding so many claimed features to the headset capsule itself is easy to brush off as obvious, but the fact that the same assignee was unable to produce a such workable product a the time of the Larsen invention is strong evidence that it is not obvious.

New claim 11 adds the important feature that the capsule and ear pad having generally similar circumferential extents. This means that the peripheral extent of the ear pad is about the same size as the periphery of the capsule. In the field of headset design, this is a monumental achievement. The Hall reference is perhaps the best proof of that. No matter what electronics package is contained within Hall, it is dramatically larger than the size of the ear pad, making the entire headset less interesting to the wearer. Furthermore, the present invention is not just a matter of matter of making components smaller, but recognition that moving multiple functions into a capsule hardly larger than the ear pad, makes the entire headphone experience much more practical and enjoyable for the user.

Claim 12 claims a structure similar to claim 1 but which adds the feature of switches capable of changing functions if held depressed a predetermined period of time. This is of critical importance in a small capsule structure where the available space for switches is limited and the user will not want to remove the headset to find a myriad of small switches. By providing mutiple functions to the switch(es) it is possible

to use larger buttons which the user can easily identify by touch. The prior art makes not mention of these features.

Claim 13 adds the concept of a fully integrated battery drawer. It is noted that Hall has a battery attachment, but the batter increases the overall size of the package. Since compactness is critical to the success of this product, providing a hidden drawer structure is a signifcant improvement over the prior art.

Claim 14, add a feature unknown in the prior are with respect to a headset operated switch by adding band pass filter which can be activated by a switch which will couple and decouple said filter. The user can make radical changes in the sound in the earpiece by simply pressing a button, on the headset it self, even if the user is a long distance from the telephone set, the necessary changes can be made. The prior is devoid of any disclosure of this concept and the closest art Hall, only vaguely refers to an electronics package of unknown capability.

Claim 15 adds the feature of activation of at least two switches causes the headset to enter a set-up mode for user adjustment of features. Since the set up mode should not be accidentally triggered, it is significant that double actuation must be done to accomplish this function. Likewise, it is therefore possible to limit the number of switches on the capsule by providing a means for changing their function from adjustment mode to set up mode. The prior art does not encounter this problem (of space limitations) so is not a teaching which would assist one in achieving this concept. Larsen is of course a larger stand along unit which the user can look at to find the right switches and Hall is massive in size. Consequently, claim 15 cannot be found to be obvious in view of the cited art.

Claim 16 recites features relating to the microphone boom is pivotally extending from said exterior side of said capsule. This is significant because the design according to Hall, creates a bigger overall package, (because clearance from the user's face must be provided), whereas the present invention moves the boom out of the way of the user by locating the pivot on the exterior side. This feature is in keeping with the overall objective of the smallest possible package size to keep the headphone as comfortable as possible.

Claims 17 recites an important feature not previously found within a headset device is the ability change the polarity of a connection to the phone system to which the headset is connected. Polarity in the world of headsets is only not positive /negative voltages, but voltage levels, signal control lines , impedance matching, etc. While it is known to provide such switching in separate boxes, there are advantages to eliminating the box and incorporating the device in the capsule. One advantage is that the controls are convenient to the user who must make the adjustments and then immediately test their effect, as specified in the disclosure on page 10 with respect to switch 32. The prior art faced an identical challenge but chose to leave such switching capability out of the headset unit itself, despite the unmet need for such an convenience. Therefore, to apply this prior art to reject claim 17 would be indeed be a significant stretching of the meaning of obvious to a person skilled in this art.

The remaining claims likewise disclose combinations which are inventive over the art for the reasons set forth above.

CONCLUSION

In view of the amendments and reasons provided above, it is believed that all pending claims are in condition for allowance. The amendments clarify the patentable invention without adding new subject matter. Applicant respectfully requests favorable reconsideration and early allowance of all pending claims.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at (952) 253-4106.

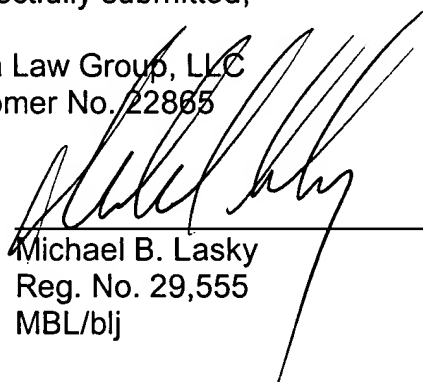
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